Statistical Bulletin

METROPOLITAN LIFE INSURANCE COMPANY

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Marriages Fewer This Year

FROM data now available, it appears that there will be about 1,600,000 marriages in the United States in 1949, about 12 percent less than the total of 1,815,000 recorded in 1948. This forecast is based on a country-wide questionnaire survey of marriages in 91 large cities for the first five months of the year conducted by the Statistical Bureau of the Metropolitan Life Insurance Company.

The number of marriage licenses issued in the large urban areas through May of the current year was about one eighth less than the number in the corresponding months of 1948. The decrease represents a continuation of the downward trend which has been in evidence since 1946, when marriages in the country as a whole reached the all-time peak of nearly 2,300,000. For the January to May period, marriages were one third fewer in 1949 than in 1946.

The decline in marriages has been country-wide for the third consecutive year, as is evident from the table on the next page. The decrease this year, however, has been much more uniformly distributed throughout the country than in the preceding years. The declines from 1948 to 1949 range from an average of 10 percent in the cities of the East South Central States, to 14 percent for those in the West Central sections of the country. There is a general tendency, this year, for the declines to be relatively high in areas where they were low a year ago. For example, the large cities of the Middle Atlantic and West South Central regions, which showed above-average declines from 1948 to 1949, recorded the smallest changes from 1947 to 1948. On the other hand, the cities in the East South Central States, which averaged the smallest relative decline from 1948 to 1949, recorded the largest drop in marriages from 1947 to 1948.

The country-wide uniformity in the decline of marriages this year is also seen in a comparison of the figures for the 91 cities classified into three broad population-size groups; the data appear in the lower tier of the table. The average decline in the number of marriages in cities with 500,000 to 1,000,000 population (according to the 1940

Census) was 13.1 percent—the same as for all cities included in this survey. For smaller cities the fall in marriages was only slightly greater, namely, 13.7 percent. In the five cities with a million or more population, the decline was least, as was also the case in the two preceding years. Thus, New York had 12.2 percent fewer marriages in the first five months of 1949 than in the corresponding period of 1948. For Philadelphia, the decline amounted to 12.8 percent; for Detroit, 12.7 percent; and for Los Angeles, 10.5 percent. On the other hand, Chicago reported a greater rate of decrease (13.9 percent) than the average for all cities in the country. Baltimore, Washington, and Cleveland, among the other cities with more than one half million population, also registered relatively large declines in marriages this year as compared with 1948.

One of the reasons for the falling off in the number of marriages this year is obviously the depletion in the supply of eligible men and women through the remarkably high marriage rates in the immediate postwar years. Among those eligible to marry, especially the divorced, the rate continues at a high level. In fact, according to present indications the marriage rate among eligible males (the single, widowed, and divorced, at ages 15 years and over) will be higher for 1949 than for any year prior to 1946.

PERCENT DECLINE, FROM PRECEDING YEAR, IN MARRIAGE LICENSES ISSUED IN CITIES OF 100,000 OR MORE POPULATION,* ACCORDING TO GEOGRAPHIC REGION AND SIZE OF COMMUNITY. 1947 TO 1949 (JANUARY THROUGH MAY OF EACH YEAR)

GEOGRAPHIC REGION; SIZE OF CITY	PERCENT DECLINE FROM PRECEDING YEAR		
	1947	1948	1949
CITIES—TOTAL	15.9	11.3	13.1
By Region:			
New England	10.9	12.2	13.2
Middle Atlantic	11.5	6.5	13.5
East North Central	13.0	10.6	13.4
West North Central	18.3	14.7	14.3
South Atlantic	20.7	17.9	13.2
East South Central	22.8	27.3	10.1
West South Central	22.7	9.1	14.1
Mountain and Pacific	20.6	13.0	11.1
By Size of City:			
1,000,000 or More	11.5	7.1	12.5
500,000—1,000,000	17.3	11.8	13.1
Less than 500,000	18.6	14.6	13.7

*In many instances, the basic data include the entire county in which the city is located.

SOURCE: Basic data for 1946 to 1948 from reports of the National Office of Vital Statistics; data for 1949, obtained by questionnaire by the Statistical Bureau, Metropolitan Life Insurance Company.

Infant Mortality Lowest in Summer

THE seasonal pattern of mortality among infants has undergone very marked changes in the past 40 years. About the turn of the century, summer was by far the most hazardous season of the year for babies. In the years that followed the situation was reversed, and the summer months became the safest. Thus, by the 1920's, the highest death rates among infants were recorded in the late winter and the early spring, and the rates during these periods were materially above those for the summer months. In recent years, the rather wide fluctuations in the seasonal curve have been ironed out, so that now there is little variation in infant mortality from month to month. The summer, however, is still the most advantageous season by a narrow margin. These changes in the seasonal pattern are clearly seen in the chart on the following page; the data relate to New York State, but they are without doubt broadly representative of the experience for the country as a whole.

The facts presented in the chart bear closer examination. In 1904-1908, the average of daily deaths among infants in July and August was more than 50 percent greater than the daily average for the five-year period as a whole. The most favorable months were November and December, when the figures were about 25 percent below average. Twenty years later, however, infant mortality was about 20 percent below average in July, and nearly 25 percent above average in March and April. Thus, in the period 1924-1928, not only had the summer bulge in the seasonal curve been converted into a trough, but the range in monthly fluctuation had been measurably reduced. In the recent period, 1944-1948, the monthly variation in infant mortality ranged only from about 5 percent below average in July to 5 percent above average in February.

The radical modifications in the seasonal curve of infant mortality reflect the degree of progress achieved in controlling the various causes of death among babies. The fact that the summer has been converted from the most hazardous to the safest season of the year is directly associated with the conquest of diarrhea and enteritis, which in years past took a heavy toll of infant life, especially during the warm months. In New York State, for example, the death rate from diarrhea and enteritis in the first year of life was 32.9 per 1,000 live births in 1904-1908; by 1924-1928, the rate had dropped to 7.4 per 1,000, and by 1944-1946 (the latest available) it was down to 1.5, an over-all drop of 95 percent. Similar declines have been recorded in communities throughout the country. The proportion of all infant deaths resulting from diarrhea and enteritis fell from nearly ⅓ to about 1/20 between the earliest and the latest period. It is a striking fact

MONTHLY VARIATION IN INFANT MORTALITY

NEW YORK STATE, 1904-1908 TO 1944-1948

*Five-year average of daily deaths in specified month, expressed as percentage of average daily deaths in each 5 year period as a whole.

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that 40 years ago the death rate from diarrhea and enteritis alone was materially greater than is the present death rate under age one from all causes combined. Many forces have been at work during these years to effect this remarkable achievement in life conservation. Among these have been the improvement in the quality of water, milk and other foods, the better education of mothers with respect to feeding and care of infants, and the immensely improved measures of general sanitation.

The further leveling of the seasonal curve of infant mortality in fairly recent years is the result, in large measure, of the control gained over the infections, many of which are most prevalent during the cold months. Pneumonia, for instance, has dropped in New York State from 11.7 per 1,000 live births in 1924-1928, to 3.0 per 1,000 in 1944-1946. Penicillin and the sulfa drugs have played a major role in this reduction among infants.

It is evident from the foregoing that the improvement in mortality among infants is attributable largely to the progress made in controlling the diseases of environmental origin. Not as marked, but still of considerable importance has been the decline in mortality from the diseases and conditions acquired during fetal life or during birth. As a result of the difference in the rate of improvement for these two broad

categories of disease, there has been a radical change in the proportion of infant deaths that occur in the first month of life. About 40 years ago, there were appreciably fewer deaths in the first month than in the remainder of the first year. At present, the number of deaths in the first month of life is more than three times the total for the remaining 11 months of infancy. But these early deaths will continue to decline.

War and the Sex Ratio of Births

DOES the ratio of male to female births increase during and immediately after a war? A number of investigators, on the basis of data for past wars, have answered the question in the affirmative, advancing various reasons for their opinion. Other observers have seriously questioned the validity or the interpretation of the statistics which have been put in evidence to substantiate this thesis. In view of these differences of opinion, it is of interest to study the sex ratio of births in the United States during World War II. If the theory that the proportion of the sexes at birth is affected by war has validity, it should have been demonstrated during this great conflict in which our country was engaged for nearly four years.

Table 1 on the following page shows the sex ratio of births for each year of the period 1937-1946, the first half of this decade being prewar years, and the second half constituting the war and immediate postwar period. The data in the table relate to the white population inasmuch as the registration of births, and particularly of stillbirths, is much more complete among white persons than among the colored.

It is true that on the basis of live births there was a slight increase in the ratio of males to females born during and right after World War II. In the five years immediately preceding the war, the ratio in the white population was just under 106 boys for every 100 girls, while in the years 1942-1946, it was above that figure in every year except 1943. But these facts must not lead to hasty conclusions. Actually, an inspection of the figures in Table 1 shows that the sex ratio of live births was also slightly upward in the prewar period. However, the difference in the trends before and during the war years is not statistically significant.

Furthermore, live births alone do not tell the whole story. In order to arrive at a complete measure of the sex ratio at birth, stillbirths need also to be taken into account, particularly since the ratio of males to females is much higher among stillbirths than among live births. When both categories of births are considered together, the trend of the sex ratio for the decade under survey is clearly not significant. The fluctuations in the ratio can be explained as chance variations. If those on the affirmative side of this

discussion are to derive any comfort from these data, it is from the figures for 1946, the first full postwar year, when the sex ratio reached a peak both for live births and total births. It will be interesting to watch the trend for subsequent years as the figures on births, by sex, become available.

During the war period, there appears to have been some increase in the sex ratio of total births among white mothers under 25 years of age, but no such tendency is discernible among older mothers. The figures are presented in Table 2.

It is also evident from these data that, in general, the proportion of boy babies is greatest among young mothers and decreases with advance in age of mother. This fact has been used to explain the supposed

TABLE 1. SEX RATIO OF BIRTHS TO WHITE MOTHERS
UNITED STATES, 1937 TO 1946

YEAR	MALES PER 10,000 FEMALES		
	LIVE BIRTHS	STILLBIRTHS	TOTAL CONFINEMENTS
AVERAGE 1942–1946	10,610	12,130	10,640
1946	10,633	12,114	10,660
1945	10,605	11,957	10,632
1944	10,604	12,080	10,634
1943	10,590	12,227	10,623
1942	10,618	12,270	10,652
AVERAGE 1937–1941	10,578	12,868	10,631
1941	10,578	12,568	10,621
1940	10,599	12,890	10,650
1939	10,575	13,053	10,630
1938	10,562	12,772	10,614
1937	10,579	13,055	10,639

TABLE 2. SEX RATIO OF BIRTHS (MALES PER 10,000 FEMALES)
TOTAL CONFINEMENTS OF WHITE MOTHERS AT SPECIFIED AGE PERIODS
UNITED STATES, 1942 TO 1946

YEAR	AGE OF MOTHER			
	Under 25	25–34	35–44	45 and Over
1946	10,698	10,652	10,559	10,620
1945	10,667	10,608	10,627	10,180
1944	10,650	10,621	10,638	10,345
1943	10,637	10,639	10,500	10,540
1942	10,696	10,630	10,568	10,640

rise in the sex ratio during war years. It has been assumed that the proportion of young mothers is greatly increased at such times and since boy babies are more common among young mothers, a rise in the general sex ratio is then to be expected. Actually, there was no rise in the proportion of births to young mothers in our country during World War II; in fact, the proportion of such births was somewhat less than in the prewar years.

Altogether, there is no evidence in the recent experience of our country that boy babies increase significantly during war and immediate postwar periods.

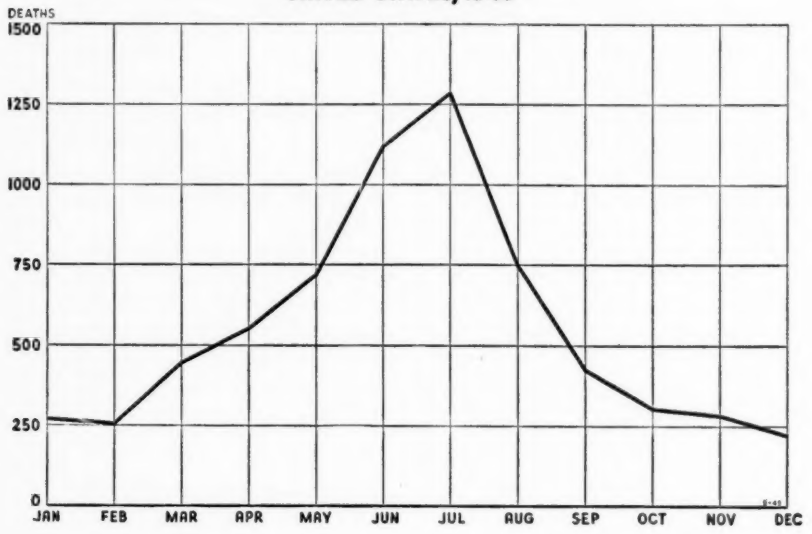
Drownings Most Frequent in July

DROWNING, third in importance as a cause of accidental death, takes around 6,500 lives in the United States each year, or about 5 per 100,000 of population. It is a fact, moreover, that there was little change in the annual rate of these fatalities in the 10-year period ending in 1947. Data for 1948 are not yet available for the country as a whole, but it seems likely from the experience among the Industrial policyholders of the Metropolitan Life Insurance Company that the number of drownings dropped appreciably last year. In fact, among these insured the death rate from drowning in 1948 was the lowest in at least four decades. But even if the toll in the general population was materially reduced last year, the number of deaths would still be large, and would challenge our every effort to reduce them.

Drownings occur in fairly large numbers every month in the year, and result from a variety of activities. Some of them are occupational in nature. Many occur among children in and around the home—in bathtubs, pails and other vessels, fish ponds or cisterns. Falls through the ice while skating take their toll; still other drownings result from children and adults falling off docks and piers. But there can be no doubt that a very large percentage of the drownings are due to unsafe practices or conditions in swimming, bathing, fishing, boating, and other water sports. This fact can be inferred from the marked seasonal variation in the number of drownings. As will be seen in the chart* on page 8, summer is the season when most accidental drownings occur in the United States. About half of all fatalities from this cause each year occur in June, July, and August. In 1946, a representative postwar year, drownings in June rose sharply to an average of 37 a day, and then to the maximum level in July, when they averaged more than 40 a day. It is surprising to find that drownings fall off rather

* The figures shown in the chart and in the table on page 9 relate to titles 183 and 172 of the 1940 International List of Causes of Death. The figures include a small number of deaths from water transportation accidents other than drowning. They do not include drownings in cataclysms, in mines, and in transportation accidents other than those due to boats.

NUMBER OF ACCIDENTAL DROWNINGS BY MONTH
UNITED STATES, 1946



Metropolitan Life Insurance Company

sharply in August; the number of deaths in that month exceeding only slightly the number occurring in May.

The importance of water sports in the toll is emphasized by the age and sex incidence of mortality from drowning, shown in the table on page 9. The death rate at all ages combined for white males in 1946 (7.8 per 100,000) was more than six times that for white females; the rate for nonwhite males (12.2 per 100,000) was eight times that for nonwhite females. Among males, drownings are comparatively frequent at all ages, but the chief victims are boys 15 to 19. Among white boys at these ages, the death rate in 1946 was 13.6 per 100,000, while among nonwhite boys the rate was 26.5 per 100,000. Drownings are negligible among white females after the teen ages are passed.

Among the common circumstances under which drownings take place are swimming alone, swimming considerable distances without being followed by a boat, entering the water too soon after eating, and undertaking feats beyond the ability of the performer—and this applies even to good swimmers. Many drownings occur when canoes and boats are overloaded, when occupants change seats, and when leaky boats are used.

Much credit for fine work in the field of water safety is due the extensive and well directed efforts of

the American Red Cross, the National Safety Council, the Boy Scouts, the Girl Scouts, and other organizations. However, the high toll of drownings in the United States, and the slow progress that has been made in their reduction, show that intensified efforts are called for if the loss is to be measurably reduced. Admittedly the problem is a difficult one because so large a share of the deaths occur among boys and young men at the "reckless ages." Means must be found to make them aware of the dangers existing in and around the water, and of the tragedies that follow such foolhardy actions as rocking the boat and shoving swimmers off docks. The attitude that it is smart to know how to take care of oneself and others in water activities must be developed among an increasing number of them. More persons at all periods of life should learn to swim well and to handle themselves properly in boats and around the water. Parents and others in charge of young children should never take it for granted that the child is safe around the water even if in familiar surroundings. Competent supervision would prevent most child drownings.

DEATH RATES PER 100,000 FROM DROWNING
BY COLOR, SEX, AND AGE. UNITED STATES, 1946

AGE PERIOD YEARS	WHITE		NONWHITE	
	Males	Females	Males	Females
ALL AGES	7.8	1.2	12.2	1.5
Under 5	7.7	3.1	3.7	1.8
5 to 9	7.6	1.6	7.1	0.9
10 to 14	9.2	2.2	20.8	3.0
15 to 19	13.6	1.9	26.5	2.6
20 to 24	8.7	0.9	15.3	1.9
25 to 34	6.6	0.6	11.8	1.2
35 to 44	6.5	0.7	10.9	0.6
45 to 54	7.1	0.8	8.1	1.1
55 to 64	7.4	0.8	9.9	1.4
65 to 74	6.9	0.8	10.7	1.8
75 and over	6.5	1.2	13.2	0

Smallpox Cases at New Low in 1948

THERE were only 59 cases of smallpox reported in the United States in 1948. This number, setting a new low record, was but one third the total (173) reported in 1947, the previous minimum. The cases last year were less than 1 percent of the number only a decade earlier; in 1938 there were 14,939 cases of the disease reported in our country.

In 1948, there were 27 States and

the District of Columbia entirely free from smallpox, an area embracing about two thirds of the total population. In this group, were the block of States from Maine through Virginia on the eastern seaboard, and the three coastal States on the Pacific. Among those with blemished records, Kansas had eight cases, the largest number for any State. Louisiana and Idaho each had five cases, and Missouri, Nebraska, and Kentucky recorded four each. The six States just mentioned accounted for fully one half of the smallpox cases last year, the others being fairly well scattered.

With the marked downward trend in smallpox, one would expect the disease to be completely wiped out in our country in the near future. It is disappointing to note, however, that the reduction is not continuing into 1949. In fact, through May there have been 49 cases this year, as compared with 45 in the like period of 1948. Four States account for more than one half the total so far this year; Missouri and Texas have each reported eight cases, and Kansas and Mississippi five each. All four of these States serve as residual foci of the disease year after year.

The American people cannot afford to be complacent about smallpox as long as there is a single case of the disease within our borders. Even when the disease is completely wiped out, vaccination and revaccination must continue in order to guard against a possible flare-up of the disease from cases which may unwittingly come into our country.

CASES OF SMALLPOX REPORTED IN THE UNITED STATES, 1947 AND 1948

STATE; REGION	1948	1947	STATE; REGION	1948	1947	STATE; REGION	1948	1947
UNITED STATES	59	173						
New England	*0*	*0*	West North Central	*19*	*41*	West South Central	*10*	*25*
Maine	0	0	Minnesota	0	1	Arkansas	1	4
New Hampshire	0	0	Iowa	0	2	Louisiana	5	2
Vermont	0	0	Missouri	4	11	Oklahoma	2	4
Massachusetts	0	0	North Dakota	3	4	Texas	2	15
Rhode Island	0	0	South Dakota	0	4			
Connecticut	0	0	Nebraska	4	6	Mountain	*11*	*16*
			Kansas	8	13	Montana	1	0
Middle Atlantic	*0*	*13*	South Atlantic	*5*	*10*	Idaho	5	3
New York	0	12	Delaware	0	0	Wyoming	1	1
New Jersey	0	1	Maryland	0	0	Colorado	2	1
Pennsylvania	0	0	Dist. of Columbia	0	0	New Mexico	0	11
			Virginia	0	0	Arizona	2	0
East North Central	*7*	*50*	West Virginia	1	3	Utah	0	0
Ohio	2	13	North Carolina	3	2	Nevada	0	0
Indiana	3	29	South Carolina	0	2			
Illinois	0	2	Georgia	1	3	Pacific	*0*	*2*
Michigan	0	1	Florida	0	0	Washington	0	0
Wisconsin	2	5	East South Central	7	*16*	Oregon	0	0
			Kentucky	4	5	California	0	2
			Tennessee	0	6			
			Alabama	0	1			
			Mississippi	3	4			

CRUDE DEATH RATES* PER 100,000 POLICYHOLDERS FROM SELECTED CAUSES
INDUSTRIAL PREMIUM-PAYING BUSINESS, *Weekly and Monthly Combined*
METROPOLITAN LIFE INSURANCE COMPANY

MAY 1949

CAUSE OF DEATH	ANNUAL RATE PER 100,000 POLICYHOLDERS*				
	May 1949	May 1948	Year to Date: End of May		
			1949	1948	1947
ALL CAUSES—TOTAL	671.0	682.7	677.1	708.2	706.8
Typhoid fever	—	0.1	0.1	0.1	0.2
Measles	.4	.5	.7	.7	.3
Scarlet fever	.2	.1	.1	.1	.1
Whooping cough	.4	.4	.3	.5	.6
Diphtheria	.2	.2	.2	.3	.7
Influenza	2.0	1.6	2.2	2.6	4.5
Pneumonia (all forms)	21.0	23.9	23.6	28.3	29.5
Tuberculosis (all forms)	27.4	29.9	25.8	28.7	32.0
Tuberculosis of respiratory system	25.2	27.1	23.7	26.1	29.0
Syphilis	5.5	6.8	5.9	7.0	7.5
Acute poliomyelitis	.1	—	.2	.1	.4
Cancer (all forms)	116.5	112.9	115.0	112.2	108.5
Diabetes mellitus	26.8	25.8	25.9	25.5	24.4
Principal chronic cardiovascular-renal diseases	318.5	318.0	325.9	342.1	332.6
Cerebral hemorrhage	58.6	60.5	60.7	64.2	64.8
Diseases of the coronary arteries and angina pectoris	79.2	78.1	80.9	82.3	73.5
Other chronic heart diseases†	147.7	144.6	150.1	158.6	155.9
Chronic nephritis	33.0	34.8	34.2	37.0	38.4
Diarrhea and enteritis	2.8	2.2	2.7	3.1	3.7
Appendicitis	2.5	2.8	2.1	2.6	2.7
Puerperal state—total	2.5	2.4	2.2	2.4	3.3
Suicide	7.5	8.3	7.0	6.9	6.6
Homicide	3.2	3.2	3.0	3.2	3.0
Accidents—total	35.8	39.8	35.9	38.9	40.2
Home accidents	8.6	6.7	10.1	10.6	10.3
Occupational accidents	3.1	4.2	3.2	4.1	4.7
Motor vehicle accidents	12.2	13.5	12.2	12.2	13.7
All other causes of death	97.6	103.7	98.2	102.9	106.1

*The rates for 1949 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†International List (1940) titles 92, 93 (c), (d), (e), and 95.

NOTE—The causes of death shown in the above table have been classified in accordance with the Manual of the International List of Causes of Death and Joint Causes of Death (1939).

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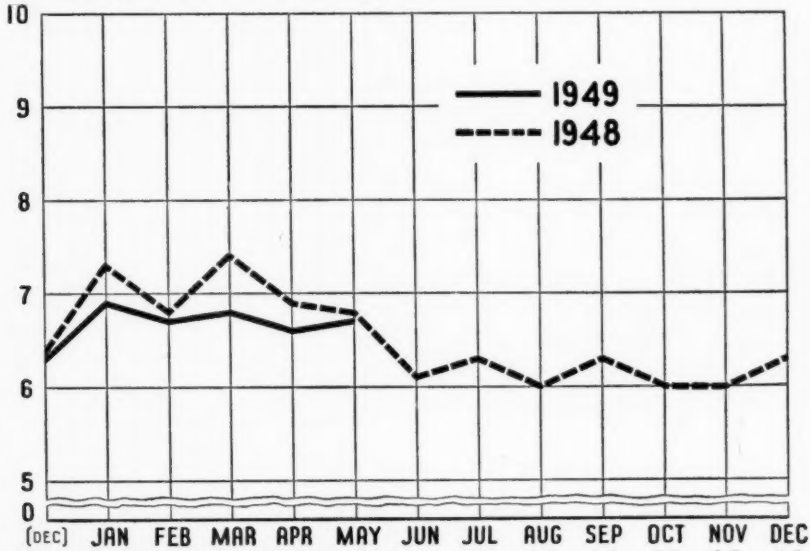
MORTALITY FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE COMPANY • INDUSTRIAL PREMIUM-PAYING BUSINESS
WEEKLY AND MONTHLY COMBINED

DEATH RATES PER 1,000 POLICYHOLDERS • ANNUAL BASIS



(DEC)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1948	7.3	6.8	7.4	6.9	6.8	6.1	6.3	6.0	6.3	6.0	6.0	6.3
1949	6.9	6.7	6.8	6.6	6.7							

Figures are provisional

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